

NOMENCLATURA PLANTARUM AMERICANARUM

I. GRAMINEAE

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In the search for names in the identification of PLUMIER's plates of plants of the Antillas (most of them from Martinique and Santo Domingo) I met, in some cases, difficulties with nomenclature. Indeed, even in families that have not been neglected in the 20th. century the correct use of the binomial nomenclature is not the rule. For some unexplainable reasons some authors or some works are overlooked or misinterpreted. These omissions cause many errors in current identification.

Before 1753 botanists, including LINNAEUS, from various countries, named the species by protologues that gave a sort of synoptical description in themselves; that was later called "polynomial nomenclature". This differed from the binomial nomenclature recently elaborated in the Species Plantarum of Linnaeus. In order to establish all the names for his system, Linnaeus took up those protologues, extracting the most relevant qualificative words that, to his mind fit best the character of the taxa. To cite some examples, BAUHIN, BARRELIER, BURMANN, FEUILLEE, MORRISON, PLUMIER, RAY, SAUVAGE and SLOANE were used. Following the first edition of the Species Plantarum, Jacquin adopting the practice of Linnaeus, specially in his Enumeratio Systematica Plantarum Plantae Insularum Caribaeis, 1760, published new species, trying to find names for his recent collections from the Caribbean region. Plumier's work furnished a number of "polynomial-basonyms". Still, not all his protologues have become binomials, and AUBLET, after returning from his travels, and preparing his *Flore de la Guiane Française*, also used Plumier's work.

At the end of the 18th. century the literature available, particularly for tropical America, was limited and known to the botanists. Aublet thought, correctly, that some of the species of the Antillean flora would be in common with those of French Guiana. Moreover, he had travelled in the island of Santo Domingo, between the 24th. of August 1764 till near the end of that year when he returned to France. In the list of the bibliography used on page 32 of his work he mentioned Plumier's published works (*Catal. Pl.*, *Genera Pl.*, *Filices Americ.*, *Plantae Americanae*) as well as the unpublished MSS and Burmann's *Plantarum Americanarum* (reproducing a part of Plumier's *icones*) on page 30. Encountering some protologues not yet transformed into binomials he proceeded in the same way as Linnaeus and Jacquin. As had his predecessors he cited the Plumier's protologues, the citations of the *Catalogus* (*Genera* or *Plantarum*), *Plantae Americanae*, *Filices*, and Burmann's protologues and plates when available. He illustrated the taxa with the citation of the *inedit* MSS *icones*. Since Aublet did not collect the plants, the plates become the types of the species, in the same manner as with the previous authors. On the other hand, when he described the plants of Guiana that he discovered, he wrote longer descriptions, gave the uses of the plants, the vernacular names, the ecology, habitat etc. This difference in method for the descriptions is summarized on page xxvij of his book :
... "Quant aux genres & espèces bien determines & bien figurés, on s'

est contenté d'en rapporter les noms connus, avec les phrases des Botanistes, & d'en indiquer les figures "(extracted from the Prospectus announcing Aublet's book) . LAMARCK and POIRET in Illustrations des Genres and in the Encyclopédie proceeded in the same way as the cited authors.

However, Aublet's work is not well interpreted and some of his names based on previous publications of old authors are considered "dubious", "excluded", &c. This has been the case for the three grasses of Plumier. Since they are species widely distributed in America and much research is carried out on this group of plants, and many Floras are in progress, I have decided to bring some order to the situation and offer this publication.

PLUMIER described and illustrated three Gramineae from the Antillas.

1. Milium arundinaceum scandens et maculosum Plumier

At present different names are applied to this species. R. HOWARD and Dulcie POWELL, while revising Antillean collections a few years ago, named specimens in the herbarium of Paris following Urban (1921) . Curiously enough GOULD in Howard's (edit.), Flora Lesser Antil., follows Hitchcock (1917); his key gives inconsistent characters to separate the species. POHL, in BURGER, Fl. Costa Rica, also follows Hitchcock. FOURNET, Fl. Guadeloupe, and ADAMS, Fl. Jamaica, use the correct name following Urban.

DAVIDSE, in his revision of Lasiacis (1978), gives a key (p.1160) in which the entries 12 and 12' point out the differences between L. ligulata Hitchc. et Chase and L. sorghoidea (Desv. ex Hamilton) Hitchc. et Chase. Unfortunately, the characters used for the purpose are more quantitative than qualitative and therefore of questionable value for a widespread species exhibiting numerous ecological variations. On pp. 1233 - 1234 he gives his reasons for excluding the name Panicum maculatum Aublet and Urban's combination under Lasiacis. As these names are legitimate and validly published, as I have explained above, they must be used on the same bases as the names of Linnaeus and Jacquin.

Summarizing:

Milium arundinaceum, scandens et maculosum Plumier

Panicum maculatum Aublet, Fl. Guiana Fr. 1: 51. 1775. Urban, Repert. Sp. Nov. 16: 149. 1919; Beih. Rep. Sp. Nov. 5: 135. 1920; Symb. Antil. 8: 32. 1921. Type Plumier MS 4: ic. 82 (from a plant from Martinique). Panicum latifolium L. var. β Lamarck, Encycl. Méthod. 4: 759. 1798. Type the same as above.

Panicum lanatum Swartz, Prodr. 24. 1788. Type Jamaica.

Panicum sorghoideum Desvaux ex Hamilton, Prodr. India Occ. 10. 1825. Type Santo Domingo, Herb. Desvaux, P.

Lasiacis ligulata Hitchc. et Chase, Contr. U.S.Nat. Herb. 18: 337. 1917. Type Trinidad, near Port of Spain, ab. St. Ann, leg. Hitchcock 10007,

28 XI 1912 US, isotype P.

Lasiacis sorghoides (Desv. ex Ham.) Hitchc. et Chase, Contr. U.S.Nat. Herb. 18: 338. 1917.

Lasiacis maculata (Aublet) Urban, Symb. Antil. 8: 751. 1921.

The last name is the correct one to be used. A diagnosis is given by Aublet and the illustration is cited, preceded by Plumier's protologue.

2. Milium latifolium sulcatum Plumier

Again, Aublet described this as Panicum and Lamarck also cited it. When it was shown to be a species of Setaria the name of S. sulcata⁽¹⁾ existing (illegitimate!) for another species the name of S. paniculifera was attributed to this taxon.

In 1809 WILLDENOW described Panicum plicatum for India, which in fact, is a Setaria. Since Panicum plicatum Lamarck has priority, Poirer gave the new name of P. palmifolium to Willdenow's species. However, KOENIG had in 1788 given the same name to a species (that we now realise is conspecific) from Siam. In Flora Bombay, T. COOKE, mistakenly established the new combination, Setaria plicata, based on Lamarck's species of Panicum. Since the Indian species is identical to the American one, the nomenclature is as follows.

Milium latifolium sulcatum Plumier

Panicum sulcatum Aublet, Fl. Guiana Franç. 1: 50. 1775. Based on Plumier's protologue, and described by Aublet. Type Plumier MS 4: ic. 105 (from a plant from Martinique).

Panicum plicatum Willdenow, Enum. Pl. Berol. 1033. Type India. Non P. plicatum Lamarck 1791!

Panicum palmifolium Koenig, Naturforscher 23: 208. 1788. Type Siam.

Panicum paniculiferum Steudel, Syn. Pl. Glum. 1: 54. 1854 illegitimate! Type: Mexico, Oaxaca, 3000 ped., leg. Galeotti 5858

Setaria sulcata (Aublet) A. Camus, Bull. Mus. Hist. Nat. (Paris) 30: 108. 1924. Type P. sulcatum Aublet.

Setaria paniculifera (Steud.) Fournier in Hemsley, Biol. Centr. Americana 3: 505. 1885.

Setaria plicata (Lamarck) Cooke, Fl. Bombay 2: 919. 1908. Type P. plicatum Lam. P-LAM.

Setaria palmifolia (Koenig) Stapf, J. Linn. Soc. London 42: 186. 1914

Original description of Panicum palmifolium Koenig (by the courtesy of F. R. Fosberg): "In Siam aber wächst ein Panicum, welches solche gefurchte Blätter hat, als wie der ersten Blätter der Palmaarten sind. Dieses wird über Mannshoch, und ich habe es der Blätter wegen, Panicum palmaefolium genannt; es könnte aber, füglicher als jennes, arborescens heissen".

(1) Setaria sulcata (Bertol.) Raddi, Agrostol. Brasil. 50. 1823 based on Panicum sulcatum Bertoloni, Opuscul. Scientif. (Bologna) 4: 230. 1820.

This last name is the one that must be used for the species of America as well for the Indian specimens. Even if the authorship is not well expressed, Hitchcock has used this name in his Manual Grasses of the West Indies. BOR, in Grasses of Burma, Ceylon, India and Pakistan has accepted all three names (S. paniculifera, plicata and palmifolia) without comment.

3. Gramen avenaceum lappulatum Plumier

AUBLET published this protologue in the genus Pharus, and it was thus recorded by Poirét in Encyclopédie Méthodique, the species is distinct from Pharus latifolius L. However, later on a new species was described for America, Pharus glaber H.B.K., which in fact is the same as Aublet's. Well illustrated by Lamarck, tab. 769 and by Pohl, Flora Costa Rica, fig. 180, the differences between the two taxa are the different proportion in length of the fruit and the glumes and the pubescence of the lemmas. The leaves are also different in shape and the epidermes are different.

Summarizing:

Pharus lappulaceus Aublet, Fl. Guiana Franç. 2: 859. 1775. Poirét in Lamarck, Encycl. Méthod. 257. 1804. Based on Plumier's protologue and described by Aublet.

Syn. : Pharus glaber H.B.K., Nov. Gen. Sp. Pl. 1: 196. 1815. Type: Nova Andalusiae, pr. Caripe, 430 hexap. IX P.

The name to be used is that of Aublet. The species can be well distinguished. However, it seems to me that perhaps hybrids are found in nature. I have observed, in a well developed inflorescence, fruits showing the characters of one species and others of the other, both normally-shaped.

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